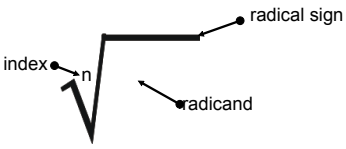
5.5 Roots of Real Numbers



Simplify

$\sqrt{36} = 6$ principal root

Solve

$\sqrt{x^2} = \sqrt{36}$

$x = \pm 6$

$\sqrt{75}$ $\sqrt{24}$ $\sqrt{32}$

$\sqrt{25}\sqrt{3}$ $4 \cdot 6$ $8 \cdot 4$

$5\sqrt{3}$ $2\sqrt{6}$ $2\sqrt{4}\sqrt{4}$

$4\sqrt{2}$

$\sqrt[3]{27} = 3$

$9 \cdot 3$

$3 \cdot 3$

$\sqrt[3]{54}$

$9 \cdot 6$

$3 \cdot 3 \cdot 3 \cdot 2$

$3\sqrt[3]{2}$

$\sqrt{16x^3}$

$4|x|\sqrt{x}$

$-\sqrt{9x^6}$

$-3x^3$

$\pm\sqrt{(q^3+5)^4}$

$\pm(q^3+5)^2$

$\sqrt[4]{x^8y^{12}z^4}$

$= x^2y^3z$

$\sqrt[3]{-27p^6}$

$-3p^2$

5 MATH $\sqrt{243}$

243

81 3

9 9

3 3 3 3

$\sqrt[5]{243a^{10}b^3}$

$3a^2\sqrt[5]{b^3}$

$\sqrt{-4}$

Not Real

$\sqrt[3]{-8}$

-2

$\sqrt[6]{t^7}$

$t\sqrt[6]{t}$

HW
p248
31,43, 49, 30-54 x3 (Multiples of 3)